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**Stage:** 10.5

**System Test Stage** 

**Responsibility:** Independent Tester(s) or Project Team

**Description:** System testing is performed on the modified system. Regression testing is a

part of system testing and is performed to validate that the modified code does not introduce faults that did not exist prior to the maintenance activity. *Exhibit* 10.5-1 (provided at the end of the section) summarizes the input, process,

control, and output for the System Test Stage.

*Input:* Input to the System Test Stage of software maintenance includes the following:

- Test Readiness Review report
- Documentation, which includes:
  - System test plans(s)
  - System test cases
  - System test procedures
  - User manuals
  - Design
- Updated system
- Updated Project Plan

**Process:** System tests are conducted on a fully integrated system. Testing shall include the performance of:

- System functional test
- Interface testing
- Regression testing
- Test readiness review to assess preparedness for acceptance testing

Results of tests conducted prior to the test readiness review should not be used as part of the system test report to substantiate requirements at the system level. This is necessary to assure that the test organization does not consider that testing all parts (one at a time) of the system constitutes a "system test."

Control: System tests should be conducted by an independent party for maximum

results. Prior to the completion of system testing, the test function is responsible for reporting the status of the activities that had been established in the test plan for satisfactory completion of system testing. The status is

reported to the appropriate reviewers prior to proceeding to acceptance testing.

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Control, continued:

Software code listings, Modification Requests, and test documentation are placed under configuration management. The system owner shall participate in the review to ascertain that the maintenance release is ready to begin acceptance testing.

Work Products:

The output for the System Test Stage of software maintenance includes the following:

- Tested and fully integrated system
- Test report
- Test Readiness Review report
- Updated Project Plan

**Review Process:** Conduct structured walkthrough(s), In-Stage Assessment(s), and a Stage Exit.

## Exhibit 10.5-1. System Test Stage

```
Place under configuration management:
   Software code and listings
  Modification Requests
  Test documentation
        +)))))))))),
                                Tested, integrated system
S)))) ► *System Test
                      * S))) \rightarrow Test reports
        .)))))))))-
                                Test Read. Review report
                               Updated Project Plan
                 T
                 R
    Metrics/measures
     Structured walkthrough(s)
     In-Stage Assessment(s)
```

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Updated software Documentation

Updated system

Test Read. Review rept.

Stage Exit